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CONFERENCE ON INCREASE IN FARMING EFFICIENCY IN NORTH CAUCASUS HELD

Moscow SEL'SKAYA ZHIZN' in Russian 11 Jan 80 p 2

/Article by Yu. Maksimenko and S. Timofeyev, special SEL'SKAYA ZHIZN' correspondents, Stavropol': "Yield Per Hectare Must Be Increased"

/Text In Stavropol', where the participants in the zonal scientific production conference for a discussion of the problem of increase in the efficiency and stability of farming in North Caucasus gathered, we met various workers--the secretary of the rural rayon party committee, agronomists, breeding scientists and kolkhoz chairmen. The discussion concerned land, grain and the future harvest. Last year's severe drought, not bypassing the Stavropol', Don and Kuban' areas, left its traces there. However, on many farms farmers came out from the combat with nature undefeated.

The Don 'Gigant' Sovkhoz, on the fields of which not a single drop of rain fell during the entire season, gathered an average of 32.5 quintals of grain per hectare on an area of 22,000 hectares and the Tselinskiy Sovkhoz, 32.9 quintals. Under the same conditions the Ipatovskiy Sovkhoz obtained a harvest of winter wheat amounting to almost 25 quintals per hectare and the Pobeda Kolkhoz in Petrovskiy Rayon in the Stavropol' area, 35 quintals per hectare on an area of 528 hectares. The average harvest of grain crops on the Kuban' Kolkhoz in Ust'-Labinskiy Rayon, Krasnodarskiy Kray, reached 47.6 quintals. The people's heroic labor and their persistence and improved skills, the technical equipment for grain growing labor and the productive force of agricultural science were compressed together, as it were, in these results unusual for last year.

Nevertheless, as stressed in the reports by A. A. Nikonov, academician of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin, I. V. Kalashnikov, director of the Krasnodar Scientific Research Institute of Agriculture, V. P. Yermolenko, director of the Don Scientific Research Institute of Agriculture, V. M. Penchukov, director of the Stavropol' Scientific Research Institute of Agriculture, and other participants in the zonal conference, despite the increase in the average annual output of agriculture, the production of grain, sunflower seeds, sugar beets,

vegetables and fodder crops in North Caucasus as yet is by no means stable. Gross grain output dropped especially sharply as a result of droughts and dry winds in 1969, 1972, 1975 and 1979. On farms in Stavropol'skiy Kray and Rostovskaya Oblast last year grain production was lowered to two-fifths.

In the light of the demands of the July (1978) and November (1979) plenums of the CPSU Central Committee party, Soviet and agricultural bodies and workers of kolkhozes, sovkhozes and interfarm enterprises in this large economic region will have to do a great deal to increase the stability and efficiency of farming, to steadily raise the volume of agricultural output and to improve its quality. What are the ways and methods of solving these complex problems? Where are the main links on which production workers and scientists concentrate their efforts?

In the regions of North Caucasus there are various soil and climatic conditions. Five climatic zones have been singled out there. Scientists say that every administrative region and separately taken farm also have their relief and soil characteristics and different material and labor resources. In order not to make mistakes, it is important to avoid routine in farming, to approach land management creatively and to maximally take into consideration characteristics and local differences.

Realization of the system of dry farming developed by scientific institutions in Stavropol'skiy Kray gives positive results. Its efficiency lies in the fact that it is of an overall seasonal nature, encompasses biological, technical, technological, organizational, economic and social factors and thoroughly takes into consideration the local conditions of arid regions. The system has been introduced on a significant area--more than 2 million hectares of arable land.

The program for an overall drought control implemented in the kray envisages the following basic measures: production specialization; stable crop rotations with a mandatory wedge of bare fallow; development of irrigation with an intensive utilization of land, primarily for fodder production; chemicalization; extensive application of mineral and organic fertilizers; soil protective techniques and organization of farming; reclamation of solonets; cultivation directed toward the maximum accumulation and retention of moisture, especially on slopes; increase in the power available to and an efficient utilization of equipment with a strict observation of technological discipline ensuring the performance of all operations at the optimum time; selection of crops and varieties suitable for local conditions through purposeful selection and seed breeding; socioeconomic measures for the retention of personnel; a flexible mechanism of economic management of production.

The introduction of grain fallow row crop rotations and of intensive drought resistant varieties of winter wheat developed by the Don Scientific Research Institute of Agriculture, strict observance of the

techniques of harvest cultivation and extensive application of advanced forms of organization and methods of utilization of equipment became the turning point in the rise in the stability of grain production and in the increase in grain output in Zernogradskiy Rayon in Rostovskaya Oblast. When fallow was expanded, the sown areas were slightly reduced, but then gross grain output in the rayon increased from 403,000 tons to 502,000 tons annually. In the last 4 years the average harvest of grain crops was 31.8 quintals, or increased by 9.5 quintals per hectare, as compared with 1966-1970.

There was no debate on clean fallow at the conference. Experience and practice stated quite convincingly: Under arid conditions fallow is necessary. But what kind of fallow? Fallow that is cultivated in a high quality manner and at the proper time, fertilized, kept clean and protected from erosion. Machine operators, agronomists, farm managers and scientists are fully responsible for this. During unfavorable, arid years such fallow yields a harvest that is twice, three times and four times as high as that on nonfallow predecessors. Furthermore, present intensive varieties on fertilized fallow yield up to 80 or 90 quintals of grain per hectare, eliminate the destruction of crops under unfavorable conditions, improve the quality of grain, reduce the expenditures of seeds and promote an increase in the output of fodder from straw. The aftereffect of fallow continues throughout the crop rotation. During arid years it lowers slumps and increases the stability of grain production.

The area of clean fallow in crop rotations in the Don and Stavropol' regions is to be brought into correspondence with scientifically substantiated sizes. At the same time, it was stressed that fallow was not handled efficiently everywhere, was not plowed on time, was sown with fodder and other crops and, ultimately, results were not obtained.

There is an in-depth search for reserves. Kuban' grain growers, in increasing the stability of grain production and fodder, put the further development of the competition for a high standard of farming in the forefront. This movement, in which thousands of brigades, departments, farms and rayons now participate, also helps to solve complex problems in an overall manner. The collectives that have earned this title with high and stable harvests introduce scientifically substantiated crop rotations and a system of soil cultivation, apply optimum fertilizer doses and gather the harvest on time and without losses. The value of the movement also lies in the fact that these farms give comradely assistance and support to the collectives that as yet have not made the projected advances.

Kuban' farmers believe that an efficient application of organic and mineral fertilizers and the introduction of a soil protective complex are the decisive links in the creation of a stable growth of harvests. Ust'-

Labinskiy, Leningradskiy and other rayons attained an average rate of application of organic fertilizers of up to 7 or 9 tons per hectare of arable land and the Kuban' Kolkhoz, up to 10 tons. As of this year Kuban's farmers will apply no less than 30 million tons of organic fertilizers to fields, or an average of 8 tons per hectare of arable land, which will make it possible to increase the yield of all crops.

Managers, scientists and specialists say anxiously, which is quite understandable, that in North Caucasus farming is carried out with a big deficit of basic nutrient elements in the soil reaching 50 to 60 percent. It is even bigger on farms in Stavropol'skiy Kray and Rostovskaya Oblast, where the amount of mineral fertilizers applied is much lower than in the region. The tendency is to least of all apply fertilizers to grain and fodder crops, which is at variance with the interests of agricultural production. Therefore, the participants in the conference made the following suggestion: It is more advisable to continue to assign the bulk of the increase in the production of mineral fertilizers to grain and fodder crops, paying special attention to the country's southern regions, which have considerable areas of irrigated land and the possibilities of obtaining the maximum yield from fertilizers.

In the Don area irrigated land occupies 7 percent of the total arable land, but yields 18 percent of the gross output of plant growing and more than 25 percent of the fodder. In the Stavropol' area the Stepnyye Zori Farm, which specializes in fodder, obtains with fertilizers and irrigation up to 100 quintals of fodder units per hectare from alfafa. Advanced corn growers in Kabardino-Balkaria and in the Kuban' and Don areas obtain 100 quintals of grain per hectare and more and introduce industrial corn growing techniques.

Unfortunately, there are also other examples where mineral fertilizers are not used economically and efficiently everywhere. For example, whereas in Krasnodarskiy Kray 1 kg of their active substance was recovered with 5.6 kg of grain and in Rostovskaya Oblast, with 7 kg, in Dagestan, with only 2.7 kg and in Checheno-Ingushetia, with 4.4 kg.

In the interests of increasing the efficiency and stability of the production of crop output, specialists and workers of land and water management bodies must better utilize every hectare of irrigated fields, placing the most productive crops there. It is possible to grow 100 to 125 quintals of corn grain, 70 to 80 quintals of winter wheat, 200 to 250 quintals of alfafa hay and 25 to 30 quintals of soybean per hectare. The experience of irrigation experts convinces us that this goal is within the powers of farmers in North Caucasus.

Breeders in the Kuban', Don and Stavropol' areas gave agriculture high-grade varieties of winter wheat, sunflower seeds, corn and other crops, which are very promising for the conditions of soil protective techniques.

The conference stressed that, while improving breeding work, along with increasing productivity it is necessary to concentrate more attention on such indicators as the resistance of varieties and hybrids to unfavorable weather factors, especially to drought, pests and diseases, improvement in quality (protein, fat and sugar), adaptation to industrial techniques and, finally, efficiency in the payment for water, nutrients and other resources. Problems connected with transferring seed breeding to an industrial basis, strengthening and developing reliable engineering and technical services on farms, training a reserve of machine operating personnel and creating the necessary production and cultural-general conditions for them are still solved slowly in some regions.

L. Ya. Florent'yev, RSFSR minister of agriculture, spoke at the zonal conference. Executives of the CPSU Central Committee, of the Stavropol'skiy Kray Party Committee and of many ministries and departments took part in the conference work. The conference worked out recommendations for increasing the efficiency and stability of farming in the region.

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INCREASING THE PROFITABILITY OF CROP PRODUCTION

Moscow SEL'SKOYE KHOZYAYSTVO ROSSII in Russian No 12, Dec 79 pp 19-21

[Article by G. Kulik, chief of the Main Economic Planning Administration, RSFSR Ministry of Agriculture]

[Text] Crop production is increasing from year to year as a result of strengthening the material and machinery base of kolkhozes and sovkhoses, the growth in the delivery of technology and mineral fertilizers, improvements in seed production and improvements in agricultural crops. In spite of individual unfavorable seasons, the gross average agricultural output increased by 13 percent during the years 1976-1978 as compared with the Eighth Five-Year Plan. This represents more than R 20 billion throughout the republic in standard, comparable prices. Thus it is precisely agriculture which provides kolkhozes and sovkhoses with their basic profit today. Thus, last year, the kolkhozes and sovkhoses of the Russian Federation received R 3.7 billion in profit from the output in this branch, including 3.2 billion from grain sales, 0.2 billion from sunflower sales and 0.13 billion from fruit sales. At the same time, the production of sugar beets, potatoes and fiber flax seeds was unprofitable on the whole throughout the republic. The production costs for a quintal of grain, potatoes, vegetables and sugar beets have increased significantly during the past five years.

What is the reason, what must we turn our attention to in order to correct the situation which has arisen?

First of all, apparently, it is necessary to analyze the cost structure of crop production to identify the growth of individual items and types of farm expenses.

Throughout the republic's sovkhoses, the cost structure for the production of agricultural products, based on basic elements in percentages of the total expenses, is characterized by the following indices (Table 1).

The growth in labor productivity in recent years promoted a reduction in that part of the production costs allotted for wages. At the same time, the farm's expenditures for fertilizer and truck transportation grew, and amortization and other allowances have become greater. The same position has

Table 1

Expenditures	In all for plant growing		Including			
	1970	1978	cereals		potatoes	
	1970	1978	1970	1978	1970	1978
Wages with set contributions	20.7	16.7	18.5	15.7	21.3	17.1
Seeds, planting material	17.8	16.3	21.7	20.6	37.3	37.7
Fuel and lubricants	3.2	3.4	4.1	4.4	1.6	1.9
Fertilizers	6.2	8.1	6.7	8.6	8.9	10.0
Truck transportation	3.5	4.9	4.3	5.7	2.6	3.7
Amortization of fixed capital	9.8	11.1	12.5	13.2	6.2	8.0
Maintainance	8.5	8.1	11.0	10.1	5.1	5.3
Other basic costs	17.7	19.6	8.3	8.8	6.0	6.2
General production and farm-wide expenditures	12.6	11.7	12.9	12.9	11.0	10.1

arisen on kolkhozes as well. Meanwhile, there is potential for reducing the production costs of the products. They include further increases in labor productivity, a reduction in expenses for seed and maintainance, a reduction in non-production expenditures, efficient use of mineral fertilizers and fixed capital. However, increasing the yield has been and remains fundamental. It is graphically apparent from Table 2 how this indicator affected the production costs of the products and the profitability of production last year.

As may be seen, in those oblasts where the yield is greater, the production costs are lower and profitability is greater.

Table 2

Oblast, kray, ASSR	Harvest, Quintals	Production cost of 1 quintal, R	Profitability %
Grain Production			
Kalininskaya Oblast	10.5	18	-15
Sverdlovskaya Oblast	18.1	11	32
Permskaya Oblast	8.6	17	-19
Voronezhskaya Oblast	24.9	4	153
Lipetskaya Oblast	16.5	6	54
Potato Production			
Bryanskaya Oblast	107	9	6
Ivanovskaya Oblast	45	17	-49
Bashkirskaya ASSR	70	8	--
Penzenskaya Oblast	44	17	-57
Chelyabinskaya Oblast	108	9	4
Orenburgskaya Oblast	65	16	-33

Open Soil Vegetable Production

Mariyskaya ASSR	131	7	32
Mordovskaya ASSR	104	11	-12
Kuybyshevskaya Oblast	199	6	20
Penzenskaya Oblast	84	15	2
Krasnoyarskiy Kray	144	9	25
Irkutskaya Oblast	69	15	2

The most rapid realization of the indicated reserves is all the more important, because an over-all program for increasing soil fertility, crop quality and increasing yield from these agricultural crops has been developed in the republic. And here much depends on the economical services of agricultural units, kolkhozes and sovkhoses. In developing current and future plans, they should specify the material and equipment, financial, labor and other and resources required for unconditional fulfillment of the planned measures.

Great potential for reducing production costs is invested in the more efficient use of fixed production capital and agricultural technology. The gross output from plant growing increased by 24 percent last year in comparison with 1971, whereas the expenditures for using the farm machinery and tractor fleet increased during the same period by a factor of 1.6. In turn, this had an effect on the cost of the standard hectare. If it was R 4.62 in 1972, it rose to R 5.23 last year; and although the volume of mechanized operations increased by 38 percent per hectare of plowing during this period, the yield in the gross harvest of agricultural products grew at slower rates. This had an effect on the production costs and caused an increase in them. The operating expenditures for agricultural machinery today are 25-27 percent of the total costs for this branch of agriculture, and reduction of these costs by only one percent will permit us to reduce farm expenses by more than R 70 million.

In order to reduce costs for operation of the farm machinery and tractor fleet, it is first of all necessary to increase the availability of the machinery, to raise its productivity during a shift, to reduce the inter-shift losses of work time and the expenses for spare parts and materials. It must be noted here that many kolkhozes and sovkhoses do not use all resources. As a result, on farms in the Mariyskaya and Tatarskaya ASSR and Bryanskaya, Ryazanskaya, Permskaya and Kemerovskaya Oblasts, the output of the standard tractor diminished last year. In the Urdmurtskaya ASSR and Vladimirskaya, Ivanovskaya, Kaluzhskaya, Kirovskaya, Saratovskaya, Sverdlovskaya and a number of other oblasts, idle time for machinery due to organization and technical reasons constituted more than 30 percent of the total work time.

On a number of kolkhozes and sovkhoses in the republic the consumption of fuel and lubricants is poorly controlled, and fuel losses during servicing and storage are permitted. As a result, last year farms in Chuvashskaya and Udmurtskaya ASSR and Vologodskaya, Tambovskaya, Saratovskaya, Permskaya, Novosibirskaya and Chitinskaya Oblasts permitted excessive fuel consumption by 41.3 thousand tons of gasoline; and in Belgorodskaya they used 9.4 thousand tons diesel fuel extra; 6.3 thousand extra tons in Chuvashskaya and Mordovskaya ASSR.

The farms are bearing great supplementary expenses for equipment repair as a result of inadequate storage of the machinery. Thus, the kolkhozes and sovkhoses of Mariyskaya ASSR and Kalininskaya and Permskaya Oblasts placed more than 20 percent of their grain harvesting combines, 19 percent of their silage harvesters and 12 percent of their potato pickers in storage with crude violations of the current State Standard.

The kolkhozes and sovkhoses are also bearing large losses from the early write-off of equipment. For the years 1976-1978, 6160 grain harvesting combines beyond the norm were written off in Bashkirskaya ASSR and Vologodskaya, Kurskaya, Orenburgskaya, Tyumenskaya and Irkutskaya Oblasts. A large number of tractors, tractor trailers and other equipment was written off prematurely on farms of Checheno-Ingushskaya ASSR and Vologodskaya, Novgorodskaya, Kalininskaya, Kurskaya and Irkutskaya Oblasts.

In the struggle to reduce the costs for maintaining and operating farm machinery and the tractor fleet, economic incentives for the equipment operators are of importance. At the same time, tests show that on many farms tractor operators, combine operators and other workers are not encouraged to save fuel and materials for repairs.

Many kolkhozes and sovkhoses have physical resources to increase crop yield by improving seed production. This is the most efficient way. How seed quality influences farming indicators may be seen from the following example. In 1978 cereal grains were sown, using primarily first and second-class seeds in Kuybyshevskaya Oblast, and in spite of the fact that a hectare of cereal crops received 16 kilograms of mineral fertilizers in all, the harvest was 19.8 quintals while the cost was R 4.89. On the other hand, in Penzenskaya Oblast, first and second-class seeds formed only 60 percent of the total, and each hectare here received 27 kilograms of mineral fertilizers. The cereal grain harvest was 17.3 quintals and production costs were R 7.17 each. Surely other shortcomings in farm cultivation have an effect on such an outcome, but the role of the seeds was nevertheless decisive. This fact is even more noticeable in potato growing. Potato planting by varieties constituted 74 percent in Sverdlovskaya Oblast, but only 28 percent in Permskaya oblast, and the results of the operations are different in these oblasts. For the years 1976-1978, the average potato yield in Sverdlovskaya Oblast was 126 quintals at a cost of R 9.6; in Permskaya Oblast, the figures are 84 quintals and R 12.8.

In recent years the yield of sunflowers has not increased on many kolkhozes and sovkhoses, although the quantity of fertilizers and the amount of equipment increases annually. As a result, the production costs for sunflowers has sharply increased during the last four years and the profitability of their production has diminished significantly. Growing sunflowers has come to produce losses on farms in Lipetskaya, Tambovskaya and Penzenskaya Oblasts. One of the main causes of such a position is, again, shortcomings in seed production. For example, in Lipetskaya oblast more than 56 percent of the areas cultivated in this crop were sown with unconditioned seeds; in Penzenskaya oblast it was 55 percent, and in Tambovskaya it was 38 percent.

The growth in material and technical base and the reduction of manual labor provide for a stable increase in productivity in the branches of agriculture. During the last 12 years this index has increased by 38 percent for grain production, 26 percent for potato growing, 73 percent for vegetable growing and 18 percent for beet growing. This fact has permitted us to free more than 564 thousand men from the branches of plant growing and to reduce the expenditures by more than R 839 million.

But even here the resources on hand are far from being used completely. Labor productivity in agriculture is increasing slowly on farms of Vologodskaya and Novgorodskaya Oblasts and Mordovskaya, Chuvashskaya and Buryatskaya ASSR. The result is a high degree of manual labor in the total labor costs. For eight years of potato cultivation labor costs calculated per hectare diminished only by 16 percent on the whole throughout the RSFSR; for vegetables it was by 25 percent, and they even increased in the production of sugar beets.

The main route to increasing labor productivity is the steady growth of full mechanization, an improvement in the use of machinery and equipment on hand, improvement of labor organization and reductions in the losses of work time. Just the fact that a reduction of labor costs by one percent on a republic-wide scale permitting production costs in agriculture to be reduced by R 80 million should suggest the importance of these measures.

As is the case in other industries, extending specialization in agriculture permits us to achieve higher technical-economic indices. Here is what data from the results of the work of specialized vegetable and fruit growing sovkhozes for 1977 has to say about this (Table 3).

The relative significance of specialized farms in the total volume of vegetable production in the public sector is now more than 42 percent. In the

Table 3

Index	Vegetable growing		Fruit growing	
	all sovkhozes	specialized sovkhozes	all sovkhozes	specialized sovkhozes
Level of profitability (From sale to the state), %	14.1	22.6	73	71
Yield, quintal/hectare	162	191	34	65
Production costs for 1 quintal, R	9.1	7.9	16.3	16.1

production of fruits, it is 55 percent, 57 percent for hops and 80 percent for grapes. However, in Amurskaya Oblast, 16 percent of the vegetable production is due to the specialized farms, and the sale of this product provided

a 700,000 ruble loss last year. In Belgorodskaya Oblast these indices were 33 percent and a one million ruble loss, respectively. In Kurskaya Oblast there are essentially no specialized vegetable growing farms, and it is not coincidental that the production and sale of vegetables produces great annual losses for the farms. Inadequate attention is paid to questions of specialization on the vegetable growing farms in Tambovskaya, Ul'yanovskaya, Orenburgskaya and Chitinskaya Oblasts as well.

Product quality is an important reserve in increasing profitability. Practice shows that farms receive significant sums supplementarily from submitting high-quality products to the state. Thus, last year kolkhozes and sovkhoses in Krasnodarskiy Kray received R 27 million just for the sale of Vigorous and Durum wheats to the state; the farms in Orenburgskaya Oblast received R 20 million and in Kuybyshevskaya oblast R 4 million. Unfortunately, there are often instances when kolkhoz and sovkhos directors, expending huge amounts of capital on cultivation and harvesting, do not sort the products out; they do not finish the job.

The state does much so that production quality might constantly improve. It creates all of the prerequisites for the motivation of labor in this direction. In particular, supplementary payment has been introduced for increasing the base sugar content in beets. As a result, the farms in Krasnodarskiy Kray received \$ 1.22 in supplementary payment for each ton: in Stavropol'skiy Kray it was \$ 0.76, whereas in Kurskaya oblast it was only R 0.02 and in Voronezhskaya R 0.00. Such supplementary payments are practically never produced in Lipetskaya and Belgorodskaya oblasts. Moreover, many farms bear heavy expenses for indemnities and rebates because of the low quality of the products they realize. Last year, the sovkhoses of the republic paid R 11.7 million to procurement enterprises for drying and cleaning sunflower seeds and R 103.3 million for drying and cleaning grain.

The resources for production and procurement of Durum and Vigorous wheats are being exploited far from completely. Thus, last year, farms in Volgogradskaya oblast produced 230,000 tons of these products and sold only 36,000 tons in all to the state as classed production, or 255 kilograms per hectare. As a result, the kolkhozes and sovkhoses did not receive R 17 million. The farms of Bashkirskaya ASSR harvested 500,000 tons of Durum wheat and sold only 33,000 tons to the state as classed products, not receiving thereby R 24 million.

Farms bear particularly significant losses for low product quality upon sale of vegetables and fruits to the state. Last year the kolkhozes and sovkhoses of Ryazanskaya Oblast submitted 13.5 thousand tons (16 percent) of substandard vegetables, not receiving thereby R 514,000. In Chalyabinskaya Oblast they lost R 926,000 for the same reason.

In the struggle for savings, one cannot eliminate the so-called 'other expenses,' which have increased significantly in recent years. In 1978 they were 10.6 kopecks per ruble of gross output from plant growing on the republic's sovkhoses, increasing by more than 25 percent as compared with 1975.

This occurred because frequently various auxillary operations not initially anticipated by the plan are recorded here. Large losses are still permitted in the consumption of electricity, solid fuel, toxic chemicals and packing materials. And this, naturally, increases the production costs of the products.

Overhead expenses, which often constitute 12-15 percent of the total expenditures for the production of agricultural products, are remaining unjustifiably high on many farms. This is associated with the fact that in a number of places advanced forms of production organization and management are being incorporated slowly, and breaches of staff and financial discipline are permitted. Thus, last year, the farms of Vologodskaya oblast permitted an overexpenditure of R 378,000 for marginal allocations to maintain the management apparatus; in Stavropol'skiy Kray the amount was R 379,000; in Amurskaya Oblast R 383,000; and Buryatskaya ASSR R 468,000.

In summing up the current agricultural year, we would wish that questions of production costs and profitability of production were more carefully analyzed on each kolkhoz and sovkhoz, that all of the elements for expenditures from which production costs accumulate be examined and that concrete measures for achieving high final results be determined.

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PROGRESS, PROBLEMS IN DAIRY-CATTLE FARMING IN MOLDAVIA

Intensifying Production

Kishinev SEL'SKOYE KHOZYAYSTVO MOLDAVII in Russian No 7, Jul 79 pp 27-29

[Article by V. Samorodskiy, chairman of the production association Molokoprom [Milk production association] of the MSSR Kolkhoz Council, candidate of economic sciences: "The Intensification of Reproduction in Dairy Livestock Farming"]

[Text] During the years of the Ninth and 3 years of the 10th five year plans the kolkhozes of Moldavia realized a number of measures to improve selection and breeding work in livestock farming. In the republic a new plan for selection-breeding work has been accepted and is being realized. It foresees raising the genetic potential of milk productivity of Red Steppe and Simmental breeds by crossbreeding them with bulls of the Black Spotted and Holstein-Friesian breeds.

At the present time in the republic there are 70,000 cows of the first generation and up to 250,000 heifers of the first and second generations of black animals. The hybrids surpass their contemporaries of the Simmental breed by 250-300 kilograms in milk yield, they have a strong constitution, their udders are of good form, they are resistant to mastitis and they are well adapted to maintenance in modern industrial complexes. In the 19th S'yezd KPSS Kolkhoz of Brichanskiy Rayon 67 crossbreeds produced 3,768 kilograms of milk during the first lactation--10.4 percent more than that produced by Simmental animals of the same age. In the yield of milk fat crossbreeds surpass Simmentals by 8.2 kilograms.

As a result of the extensive, purposeful work to improve selection-breeding operations and the productive qualities of cattle, last year Brichanskiy Rayon achieved the highest indicators in the republic regarding milk production. Per 100 hectares of agricultural lands 723.5 quintals of milk were produced, with the average cow producing 3,700 kilograms. During 3 years of the 10th Five-Year Plan the state was sold 8,300 tons of milk above total procurement, including supplementary tasks.

The basis for the raising of highly-productive animals in this rayon is the strict selection of primapara heifers according to milk yield, fat content in milk, form of udder and speed of milk production under conditions of mechanized production. Special rations have been developed here for all of the replacement herd. These rations help to adapt the animals to a feeding regiment. In each kolkhoz the artificial insemination of the basic spotted herd is performed correctly. The animals resulting from insemination and the calving of cows and primapara heifers and their physical condition are constantly controlled. In enterprises all heifers are allowed to calve. Such selection and the replenishment of the dairy herd guarantee a high milk yield and a good milk quality and almost completely eliminate the premature rejection of cows. As a rule each cow is utilized no more than for 7-8 lactations. Characteristically, there is less barrenness in such herds.

In 1978 in the enterprises of Teleneshtskiy and Floreshtskiy rayons 13-18 primapara heifers per 100 cows were introduced. Within the herd structure, 47.3-48.2 percent of the cows are older than the eighth lactation. Because of this the results are low--2,704-2,814 kilograms of milk per cow. In Brichanskiy Rayon, on the other hand, where last year each 100 cows yielded 39 heifers, only 18 percent of the cows were older than the eighth lactation. The kolkhozes of this rayon produce 97-99 calves per 100 cows. It is this that determined the high productivity of the animals.

Scientific research and practical experience have determined that the milk productivity of cows of the main breeds raised in the republic increases only until the fourth calving and drops sharply after the fifth and sixth. After the eighth calving productivity is 20-25 percent lower than after the fourth and with each year it drops another 10-15 percent although feed expenditure remains the same. The enterprises of Brichanskiy, Teleneshtskiy and Floreshtskiy rayons expend 42-44 quintals of feed units for one cow annually on the average. This quantity is sufficient for obtaining 3,600-3,800 kilograms of milk per cow. However, only the enterprises of Brichanskiy Rayon have reached this level of productivity. The kolkhozes of Teleneshtskiy and Floreshtskiy rayons expended the same amount of feeds but the productivity of cows there is 886-996 kilograms lower than in Brichanskiy Rayon.

The following conclusion can be drawn: The highest productivity of cows is achieved in those rayons where there are fewer old animals and where heifers are utilized more.

In order to replace the old, low-productivity stock and to consistently increase the herd of brood cows in the republic's enterprises it is essential to introduce no fewer than 35-40 heifers per year per 100 cows. At the present time only 25 are being introduced. This problem can be solved in only one way--all newborn heifers, regardless of the productive qualities of their parents, must be raised for replacement purposes. In doing this the effectiveness of selection increases significantly. Calculations demonstrate that under republic conditions this will yield an additional 30,000-40,000 tons of milk and 10,000 tons of beef.

In Moldavia a broad network of inter-enterprise complexes was created for raising heifers and 127,000 calves are being raised here. The availability of calves enables the complexes to raise an additional 60,000 heifers per year. Nevertheless, because of the insufficiency of capacities in the complexes and the low level of feeding, these 60,000 heifers are not utilized for replacement purposes. Of the 920,000 heifers produced in Moldavia during the last 6 years only 409,000 (44 percent) were raised to calving age. The utilization coefficient of heifers is particularly low in Teleneshtskiy, Kantemirskiy, Faleshtskiy, Kutuzovskiy, Floreshtskiy and Dondyushanskiy rayons.

The quality of raising heifers is very important. A decisive role in this is played by the age and live weight of calves during the first insemination. According to scientific data and practical experience, cows that calve at the age of 25-30 months produce 1.5 times more milk than those that calve at over 36 months of age.

The heifers of dairy breeds should be inseminated at the age of 16-18 months; of mixed breeds--18-20 months. By this age live weight should reach 350-380 kilograms, or 380-400 kilograms to achieve a milk yield of over 4,000 kilograms. But unfortunately in the majority of enterprises only 20 percent of the heifers are inseminated at ages up to 2 years. According to data from the last valuation made in the best enterprises of the republic, the heifers of the Black-Spotted breed weighed 299 kilograms at the age of 18 months, of the Red Steppe breed--289 kilograms and of the Simmental breed--297 kilograms. In Teleneshtskiy, Floreshtskiy, Kotovskiy, and Faleshtskiy rayons not enough attention is given to raising calves. Here heifers are inseminated at the age of 27-30 months. The average daily weight gain is 260-350 grams. During the winter the livestock is maintained too long, receiving meagre rations. As a result, kolkhoz farms are filled with underdeveloped primapara heifers, which consequently are sold for meat at a great loss. Old animals remain in the herd.

With the introduction into operation of heifer complexes the kolkhozes of many rayons have ceased to raise heifers completely. It would be expedient to renew this work in each enterprise. Operations must be organized so that on the eve of calving the heifer is over 25-27 months of age and weighs no less than 350 kilograms. This can be achieved if the average daily weight gain of the heifer is 600-700 grams during the entire maintenance period.

Independent groups of cows-primapara heifers must be established on kolkhoz farms. In no case should they be used to replenish old groups. The group of heifers that are being readied for calving should be assigned to operators and after calving should be trained for machine milking.

A high rate of barrenness is a great hindrance to the growth of the herd and its productivity. In 1978 in the republic's kolkhozes 14,700 head did not calve, resulting in a significant underproduction of milk and beef.

The republic's kolkhozes have low qualitative indicators for dairy livestock farming. The average fat content of the milk is less than the base content. As confirmation of this we can present the data from the kolkhozes of Leovskiy and Dondyushaskiy rayons, where the average milk content was 3.31 and 3.37 percent. Because of the low fat content of the milk the enterprises of the dairy industry in 1978 failed to credit the republic's kolkhozes with about 16,000 tons of milk totalling 3.6 million rubles. The basic reason for this was the insufficient level of feeding for cows, the nutritionally-unbalanced rations and the utilization of bull-sires that have not been tested for the quality of progeny for the given characteristic. The absence of the necessary controls has in some cases resulted in the adulteration of milk.

Breeders have the task of increasing milk yield and also of raising its fat and protein content.

The effectiveness of selection-breeding work increased to a significant degree as a result of the introduction of a relatively new method of long-term storage of sperm from bull sires using deep-freezing. At the present time the state breeding stations of the republic have 2.8 million doses of sperm taken from bulls which have been tested for the quality of their offspring. Nevertheless, in some kolkhozes in the republic bulls are utilized which do not meet the growing needs in productivity of females, comprising only 3,000-3,500 kilograms of milk annually. A number of enterprises having small dairy farms maintain bulls of little value, which are the "weeds" of livestock farming.

In the kolkhoz-cooperative sector of the republic 35 dairy complexes with untethered box-stall upkeep have been built and put into operation. However, during the building and start of operations the questions of organizing reproduction were given little consideration. Moreover, a high concentration of cows, errors in feeding, noise from operating machines, adynamia and hypodynamia, the drop in individual care and the lack of personal responsibility have a negative effect on the reproductive functions of animals.

In order to increase the efficiency of artificial insemination under new conditions a radical restructuring of all work on stock reproduction is called for. Whereas in the previous system of upkeep the main records on the physiological condition of cows were kept by the milkmaid, now with the mechanization of labor-consuming processes the function of workers in livestock farming has changed and the milkmaid (master of machine milking) does not participate in selecting the cows which are in season. An insemination technologist cannot establish rutting in cows with quality and on schedule without having a precise and complete record and without a good method of marking animals. For this reason 30 percent (and more) of the cows arriving at the point for artificial insemination are not in season or have already begun or concluded their oestrus cycles. This results in the omission of the regular sexual cycle. Some animals fall out of view completely and remain infertile for a long period of time.

The question of where the artificial insemination of animals should occur still has not been solved. Many dairy and heifer complexes are equipped only with laboratories for storing sperm and instruments, but there are no model points with maneges. In connection with this cows are inseminated right in the stock yards, which does not permit us to follow the necessary veterinary-sanitary rules of work.

During the winter insemination takes place in cold facilities using cold instruments, resulting in a sharp drop in the temperature of the sperm (the sperm is thawed at a temperature of 38°-40° but when insemination takes place during the winter the temperature is 8°-10° and lower) which lowers its insemination capability.

Within the system of prophylactic measures to guard against infertility in cows is the organization of active exercise walking prior to calving and beginning 3-4 days after calving. In most dairy complexes the problems of organizing exercise walks have not been solved and animals receive exercise in pens on pasture lands.

The effectiveness of artificial insemination depends to a certain degree on the training of insemination technologists. Unfortunately, the necessary attention is not given to this problem everywhere. Frequently this work is done by individuals who do not know the basics of the physiology of reproduction.

The new system of pedigree work and stock reproduction is very promising for creating large herds of highly productive stock which meets the needs of the industrial conditions of production better, which will enable us to increase the volume of livestock production significantly, to decrease losses and to raise the economic effectiveness of the branch.

Commentary Noted

Kishinev SEL'SKOYE KHOZYAYSTVO MOLDAVII in Russian No 12, Dec 79 p 40

[Article: "The Intensification of Reproduction in Dairy Livestock Farming"]

[Text] An article entitled "The Intensification of Reproduction in Dairy Livestock Farming" published in No. 7 for 1979 discussed the problems of dairy livestock farming in the republic. Specific rayons were criticized for poor work organization. Among them was Teleneshtskiy Rayon, in whose kolkhozes the coefficient for the use of heifers is very low, as was pointed out in the article. Farms were filled with underdeveloped primapara heifers which were then sold for meat at a great loss. Old animals were retained in the herd. Feed expenditures for them are large but productivity is low. Heifers were inseminated at 27-30 months of age. The average daily weight gain was 260-350 grams. During the winter the stock received meagre rations.

The editors received an answer to the article from the chairman of the rayon soviet of kolkhozes, Comrade I. F. Troyan. The criticism was recognized as justified. At the present time the helper complex has been strengthened with cadres. The facilities have been remodeled. This year the enterprise has been operating at planned capacity and will fulfill the plan for returning heifers to enterprises that participate in cooperation. At the same time there was an improvement in the quality of the heifers and in the live weight at which they are inseminated. The herd of brood cows was renewed by over 20 percent. All cows older than 8-10 years were removed from the herd. All kolkhoz farms have created control yards for preparing heifers for calving and for milking cows and primipara heifers.

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PROBLEMS AND DISAGREEMENTS OVER CATTLE PROCUREMENT PROCEDURES

Moscow ZAKUPKI SEL'SKOKHOZYAYSTVENNYKH PRODUKTOV in Russian No 11, Nov 79
pp 12-15

[Article by G. Yerchenkov, deputy chief of State Inspection for Procurements of Livestock Products of USSR Ministry of Procurements: "A Method Tested by Practice"]

[Text] The acceptance of cattle based upon their weight and quality has become a firm part of operational practice. The majority of workers in the industrial and procurement spheres are convinced regarding the advantages of this method over such acceptance based upon live weight, especially when organizing the delivery and acceptance of the animals at the production site and their centralized transporting using vehicles furnished by the procurement official. However, a number of specialists dispute this opinion and continue to view the former method as being more successful.

We are herewith publishing an article written on this subject by a senior specialist in the organization of cattle procurements, Grigoriy Pavlovich Yerchenkov.

In the decisions handed down during the 25th CPSU Congress, emphasis was placed upon the need for improving procurement methods, further expanding direct contacts between kolkhozes and sovkhoses on the one hand and the processing and trade enterprises on the other, raising their responsibility for the quality of the products being procured, implementing improvements in the transporting and storage of agricultural products, introducing container shipments, expanding the acceptance of products directly at the production sites and their transporting using vehicles furnished by the procurement officials and strengthening the material and technical base of the procurement organizations.

How are these decisions with regard to cattle procurements being carried out? What trend is being followed in implementing improvements in the

methods employed for procuring these products? In order to obtain a clearer understanding of this situation, a glance into the past is deemed advisable.

Prior to 1964, the cattle obtained throughout the country in the form of state procurements was paid for on the basis of live weight. The cattle supplied by an owner was weighed on the scale of the procurement official and a determination was made as to the quantity of the product, that is, the weight of the animals. The established deductions for the content of the gastro-intestinal tract and other deductions were applied to this weight, the nutritional value was determined and a computation was carried out with the supplier of the product for the live weight of the animals.

Over a period of more than 30 years, the practice of accepting cattle based upon live weight has shown that the use of this method arouses many disagreements in evaluating the products, that the acceptance of cattle according to live weight is inadequate and that another approach is required for determining the quality and quantity of meat.

During the 1964-1969 period, in accordance with a governmental task, an experiment was carried out in a number of union republics concerned with introducing computations with kolkhozes and sovkhozes for the acceptance of cattle according to the weight and quality of the meat during the slaughtering of the cattle. The study of the computations for cattle accepted according to the quality and weight of the meat was conducted under the direction and using the methods of the All-Union Scientific Research Institute of the Meat Industry.

The essence of this method consists of the following: the animals are paid for not on the basis of live weight, but rather according to the amount of meat obtained following the slaughtering of the animals. The ownership of the animals (to a particular farm) is ensured by means of individual maintenance for groups of animals or by branding. After the cattle have been slaughtered the meat is weighed, the quality of the meat is determined simultaneously and a payment is made. Towards this end, the procurement prices for the cattle are converted into procurement prices for the meat, based upon the actual yields of meat obtained during the past 3 years. This method makes it possible to determine in a more objective manner the value of an animal from a quality standpoint and to establish the amount of true product -- meat -- rather than live weight, which is a variable quantity.

Based upon a study of procurement practice, the principal trends and methods for improving procurement operations were determined. During the 10 years which elapsed from the moment that a positive evaluation was made by the government concerning the new method of computations for cattle, this method gained increasing popularity in a majority of the union republics. In 1978 and for the country as a whole, more than 80 percent of the cattle were accepted based upon the weight and quality of the meat. Practically all of the cattle being obtained from kolkhozes and sovkhozes in the Russian

Federation, Ukrainian SSR, Belorussian SSR, Kazakh SSR, Latvian SSR, Estonian SSR, Moldavian SSR, Uzbek SSR, Tadzhik SSR and the Turkmen SSR are being accepted based upon the weight of the meat. A portion of the cattle accepted on the basis of live weight in these republics constitute cattle procurements carried out at farms by procurement organizations for the purpose of further fattening of the animals.

It was not too long ago that the kolkhozes and sovkhoses, in order to fulfill their plans for selling meat to the state, were forced to turn over a certain portion of their low-weight cattle and the state organizations, assuming the availability of the necessary conditions, had to assume responsibility for the pre-fattening of the animals. At the present time, more and more kolkhozes and sovkhoses are able to carry out this cattle fattening work themselves and to high weight conditions. Moreover, inter-enterprise facilities are being created for fattening purposes for state cattle procurement organizations in the RSFSR, the Kazakh SSR and in other republics. These facilities are also required to improve the cattle to high weight conditions, so as to ensure that the income from the sale of the cattle is directed to the kolkhozes and sovkhoses.

Under these conditions, there is no longer a need to assign cattle obtained on the basis of state procurements to fattening regimes. To the contrary, an increasing number of such interenterprise facilities specializing in fattening operations are striving to organize the raising and fattening of young cattle stock, commencing at a very early age, obtaining calves weighing 40-50 kilograms and raising them to a weight of 400-500 kilograms. The completion of this process in all of the union republics, that is, the raising and fattening of cattle until they are turned over to the state, in the absence of an extract of the acceptance receipts, and shipment off for slaughtering following the fattening operations, will make it possible to carry out completely computations on the weight of the meat with all of the kolkhozes and sovkhoses. In this manner, the initial stage in improving the method of cattle procurements will be completed.

At the same time, a second stage is under development -- acceptance of the cattle on the farms and their delivery for slaughtering using transport vehicles supplied by the procurement official. Such acceptance is called for in the existing instruction. At the same time, this instruction authorizes acceptance according to live weight, provided the procurement official goes to the farm, brings the required transport vehicles and carries out all operations associated with acceptance of the product: weighing of the cattle, determining the nutritional value and the cost of the cattle according to the procurement prices, issuing a receipt and settling accounts with the supplier of the products.

Some specialists express the opinion that the method of accepting cattle based upon the weight of the meat does not correspond with the interests of the kolkhozes and sovkhoses and does not make it possible to convert over to accepting the products directly on the farms, since the computation for the

cattle is carried out only after the animals have been slaughtered at the meat combines. The acceptance of cattle based upon the weight of the meat supposedly does not ensure complete preservation of the carcasses prior to their being weighed and during such acceptance conditions are created for the misappropriation of the meat on the conveyer line in the slaughtering department of a meat combine. This form of procurements is described as follows: the cattle accepted at a meat combine or farm by a procurement official, in terms of number of head and delivered to a meat combine, is considered to be "nobody's"; no computation is carried out for it and the money is turned over to the supplier only after the animals have been slaughtered and the carcasses weighed. Thus the animals may not be fed or watered at the meat combine; they will lose weight and nutritional value and only the meat combine will profit. The kol'hozes and sovkhazes will sustain losses. Moreover, the opponents of the new form of meat procurements believe that the cattle still continue to be "nobody's" even after entering the slaughtering department and being placed on the conveyer line: up until the moment of weighing, the carcass of an animal is not considered to have been accepted by the meat combine and anything can be done to it. For example, the best meat can be cut off and only bones sent to the scales.

Since such an opinion has been expressed, let us examine the shortcomings associated with the acceptance and delivery of animals based upon the weight and quality of the meat, to see if indeed they are valid.

It would seem to be a simple enough matter to accept cattle according to their live weight: an animal is weighed and its weight determined. However, this live weight includes the hide, horns, feet, head, trunk and the contents of the gastro-intestinal tract. The live weight, or the weight of an animal in live form, is a variable factor that is dependent upon many conditions, including upon the degree to which the gastro-intestinal tract is filled, the weight of the contents of which amounts to 10-20 percent for ruminant animals. The greater the amount of time that elapses following feeding, the lower this weight, since during this period digestion takes place, nutrients are assimilated and the products of digestion are discarded. Thus, the delivery and acceptance of cattle based upon live weight arouses a desire in the supplier to weigh and turn over an animal as quickly as possible after it has been fed and in the recipient, quite another desire -- to delay the weighing process and thus obtain a lesser weight.

According to data supplied by the All-Union Scientific Research Institute of the Meat Industry, the weight of animals changes in the following manner depending upon the length of time they go without food. When deprived of food for 24 hours, the weight of young cattle stock (live weight) decreases by 6 or more percent and when this period is extended to 36 hours -- nine percent. Such reductions in weight occur mainly owing to reductions in the content of the gastro-intestinal tract. A noticeable reduction in the amount of fatty tissue is observed during the second 24 hour period.

Moreover, it should be borne in mind that the reduction in live weight commences immediately during the animal maintenance process and becomes noticeable within 3-4 hours or more following feeding and watering. The amount of reduction in live weight will depend not only upon the degree to which an animal was fed but also upon what it was fed. The emptying of the gastro-intestinal tract when the feed consists of pulp residue, malt residue, fodder or young grass occurs considerably more rapidly than when the cattle are fed straw, hay or other coarse feeds.

There can be no doubt but that cattle presented for delivery to the state directly on a farm will be fed and watered. The weight of the contents of the gastro-intestinal tract will be at a maximum figure. The recipient of the cattle will be unable to check upon the time of feeding of the animals. This will give rise to discrepancies when evaluating the degree to which the animals were fed. Nor will the problem be solved by the established three percent deduction. And here is why. When accepting cattle according to live weight, this value becomes an accounting value at each enterprise, with an evaluation of the quality of the enterprise's operations being dependent upon it. Meat yield norms in percentages of live weight will be established for each meat combine and this again will be dependent to a considerable degree upon the degree to which the gastro-intestinal tract is filled. As already pointed out, the weight of the contents of the tract fluctuates from 10 to 20 percent. If the weight of an animal is 400 kilograms and the weights of the contents is 10 percent, that is, 40 kilograms, then the weight of the remaining portions of the carcass is 360 kilograms. If the weight of the contents is 15 percent (60 kilograms), then the remaining portion will be 340 kilograms, that is, 20 kilograms less. Each additional kilogram of content in the gastro-intestinal tract serves to increase the live weight but not the amount of meat. By employing a three percent deduction from the live weight, the state reduces the payments by this three percent. But in such instances a considerable portion of the contents of the gastro-intestinal tract is paid for according to the price for the meat.

Thus, when accepting and paying for cattle according to live weight, the cost of the product proper, that is, the meat, will depend upon the degree to which the animals were fed.

An equal number of disagreements arise in connection with the second operation, required when cattle are accepted according to live weight -- determining the nutritional value. In accordance with the existing standard, the quality of cattle is subdivided into three categories of nutritional value: high, average and below average. The nutritional value must be determined by means of external inspection, by visual evaluation of the degree of development of muscular tissue and also by feeling the fat deposits at certain points in the trunk of an animal. It is obvious that such an evaluation of the quality of an animal requires that both the recipient and the supplier possess a good knowledge of the science of commodities and strong specialized skills. Experience in the acceptance of

cattle according to live weight, and such experience was accumulated in all areas up until 1967-1969, has shown that arguments frequently arose over the degree to which the animals were fed. The inspector would claim that the cattle were overfed and the supplier would insist that they were provided with very little food. Many disagreements arose when determining nutritional value -- the supplier would insist on a "high" evaluation, while the inspector displayed a preference for "average." The arguments were resolved on the basis of a controlled slaughtering, that is, an evaluation was conducted following slaughtering in order to determine the quality of the meat.

Thus, when accepting cattle according to live weight directly on the farms, conditions may arise which promote disagreements in evaluating the quantity and quality of the products. Thus, it is recommended in the instruction that these disagreements be resolved by means of a controlled slaughtering.

Let us now examine all of the "accusations" directed against the method of accepting cattle based upon the weight and quality of the meat.

It seems to us that statements which hold that when cattle is accepted according to the weight of the meat, the meat belongs to "nobody" and anything can be done to it "in accordance with the wishes of the inspector" and that pieces can be cut off a carcass that belongs to "nobody," are based upon the desire to reject this method for any reason whatsoever.

In the Latvian SSR, the first republic to introduce the method of cattle computations according to the weight of the meat, no disagreements occurred at any of the 14 meat combines with regard to evaluating the new method. The delivery and slaughtering of cattle is organized here under strict controls established by the supplier. Specially trained and highly skilled workers in the sphere of meat deliveries, individuals familiar with the processing technology for cattle, are available at all of the enterprises. They control the movement of each head of cattle from the moment it is delivered to the meat combine base until the carcass is weighed following slaughtering. The cattle delivered to a meat combine and accepted on the basis of number of head are maintained at bases having watering areas. A farm representative monitors the maintenance conditions for the cattle and, upon detecting violations, requires that they be corrected. Thus, the formula "nobody's cattle" will manifest itself only if the supplier fails to exercise control over the maintenance of the cattle at the base. It bears mentioning that some enterprises in Latvia and other union republics are presently striving to reduce the maintenance periods for cattle at the meat combine bases; they make arrangements with the supplier to commence the pre-slaughtering seasoning of the animals while they are still back on the farms. Once delivered, the animals are immediately sent to the slaughtering department. The situation is the same in the case of a carcass that does not belong to anybody. The dressing of each carcass must be carried out in strict conformity with the technological

on the processing of cattle. The workers on the conveyer line cannot and must not carry out unwarranted trimming of a carcass. A technologist at the meat combine monitors the operation to ensure that this is not done. It should also be monitored by a representative of the farm -- the authorized agent for the delivery of the meat.

Thus the problem of cattle ownership can and must be solved at each enterprise and in each zone of supplier-farms through organization of the entire process of delivering the animals under strict control of the farm representatives. Control over the maintenance of the cattle must be continued at the meat combine base and the conditions for transporting, slaughtering and processing the cattle on the conveyer line must be observed. Only this will make it possible to eliminate the product "ownership" problem prior to the moment of delivery.

The converting over once again to accepting cattle according to live weight and directly on the farms has just such an aspect. As is known, the plan for state cattle procurements is approved for live weight. When conducting cattle computations according to the weight of the meat, a need arose for converting the weight of the meat obtained into live weight. In order to take into account the fulfillment of the state procurement plan and in accordance with the VNIIMP [All-Union Scientific Research Institute of the Meat Industry], conversion factors for use in converting the weight of the meat into live weight were developed in each union republic and approved by the councils of ministers of the republics. For the purpose of greater objectivity when determining the conversion factors, use was made of the actual and average meat yields for 3 years preceeding the year in which a conversion was made over to accepting the cattle based upon the weight of the meat.

The meat yield level, as already mentioned, is dependent upon the quality of the cattle, the breed, the weight of one head, the nutritional value and the degree to which the animals were fed. All of these qualities were reflected in the actual yields obtained during the 3 years. At the present time, the quality of the cattle has changed sharply compared to that of 10-12 years ago. An increase has taken place in the average weight of one head, a larger number of cattle are in a high state of nourishment and improvements have been realized in the breeding structure of the cattle. All of these factors have produced a situation at the present time wherein the test weight of cattle on many farms exceeds the actual weight of the animals. This is particularly noticeable in the case of cattle which were fattened at specialized farms and livestock complexes. A special check carried out by USSR Gosplan has shown that the test weight exceeded the actual weight of the animals on all of the farms where the check was conducted. When a conversion is made over to accepting cattle according to live weight, the farms will not have this test weight.

It should also be recognized that confusion in the indices, between the procurement plan in live weight and the results of the actual delivery -- in

dressed weight -- will not promote improvements in procurements. Such a situation can be corrected only by converting over to planning cattle procurements based upon dressed weight. This requires the accelerated development of a method for making the plan for procurements in dressed weight available to the farms. The carrying out of experimental work using this method will undoubtedly be of assistance in solving this problem. Obviously, in one of the republics and under the guidance of scientists, recommendations should be developed, ideally on the basis of an experiment, for a method and plan for selling cattle to the state according to dressed weight. One of the most important conditions is that of ensuring that the farms sustain no losses when converting over to planning procurements of cattle based upon the weight of the meat.

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KAZAKHSTAN SHEEP WEIGHTS COMPARED--In Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 12 Dec 79 p 1 an item praises a kolkhoz in Dzhambul'skaya Oblast, which, "sends to the meat combine only the best fattened sheep, weighing 60 kilograms each--a quarter more than the average." [Editorial Report]

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